

Serial No.: 08/509,359  
Filed: July 28, 1999  
Group Art Unit: 1642

**AMENDMENTS**

**IN THE CLAIMS**

Please cancel claims ~~24, 71, 73-77, and 80-94~~, without prejudice.

Please add claims 95-108 as follows:

95. A substantially pure human Presenilin-2 (PS2) protein.

96. The protein of claim 95, comprising the amino acid sequence shown in SEQ

ID NO: 138.

97. The protein of claim 95, wherein the protein comprises an amino acid

*F1* sequence with 95% sequence identity to the amino acid sequence shown in SEQ ID NO:138.

98. The protein of claim 95, wherein the protein comprises the amino acid sequence shown in SEQ ID NO:138 containing an amino acid substitution therein.

99. The protein of claim 98, wherein the human PS2 protein has an amino acid substitution at position 141 of SEQ ID NO:138.

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100. The protein of claim 98, wherein the human PS2 protein has an amino acid substitution at position 239 of SEQ ID NO:138.

101. The protein of claim 95, which is a splice variant of the amino acid sequence shown in SEQ ID NO:138.

102. The protein of claim 101, wherein the splice variant is encoded by a polynucleotide comprising SEQ ID NO:137 which polynucleotide lacks a triplet GAA codon at nucleotide positions 1338-1340.

*E/*  
*✓*  
103. A substantially pure human PS2 protein, encoded by the nucleic acid sequence shown in SEQ ID NO:137.

104. The protein of claim 103, encoded by a nucleic acid sequence having a sequence with 95% sequence identity to the nucleic acid sequence shown in SEQ ID NO:137.

105. The PS2 protein of claim 103, wherein the nucleic acid has the sequence shown in SEQ ID NO:137, containing a mutation therein.